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D E C I S I O N
of 14 October 1994

Case Number: T 0596/93 - 3.2.4

Application Number: 87117593.1

Publication Number: 0269124

IPC: B65G 65/48

Language of the proceedings: EN

Title of invention:

High-consistency pulp tower for discharging said pulp

Patentee:

A. AHLSTROM CORPORATION

Opponent:

SUNDS DEFIBRATOR INDUSTRIES AKTIEBOLAG

Headword:

-

Relevant legal provisions:

EPC Art. 56

Keyword:

"Inventive step - yes"

"Burden of proof"

Decisions cited:

T 0220/83; T 0534/89

Catchword:

-



Case Number: T 0596/93 - 3.2.4

D E C I S I O N
of the Technical Board of Appeal 3.2.4
of 14 October 1994

Appellant: SUNDS DEFIBRATOR INDUSTRIES AKTIEBOLAG
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Decision under appeal: Decision of the Opposition Division of the
European Patent Office dispatched on 4 May 1993
rejecting the opposition filed against European
patent No. 0 269 124 pursuant to Article 102(2)
EPC.

Composition of the Board:

Chairman: C. A. J. Andries
Members: M. G. Hatherly
J. P. B. Seitz

Summary of Facts and Submissions

I. The decision of the Opposition Division to reject the opposition against European patent No. 0 269 124 was dispatched on 4 May 1993.

II. The granted Claim 1 reads as follows:

"A high-consistency pulp tower, comprising at least one rotating means (10, 17, 31) provided with transport elements (14, 22, 32) for feeding pulp towards one or several outlets (4, 23) located in the bottom wall of the tower, wherein the rotating transport elements are composed of arms (14, 21) rotating around a vertical shaft (9, 18), the arms extending outwards from the shaft and being provided with scraper plates (14, 22) disposed in an inclined position in relation to the direction of their movement and wiping the surface of the bottom (3, 16) or moving close to the said surface, **characterized** in that in the area between the vertical shaft (9, 18) of the rotating means and the outlet(s) (4, 23) scraper plates (14', 22') are provided for feeding the pulp from the center outwards: and in the area outwards from the outlet(s), scraper plates (14", 22") are provided which feed pulp from the edges towards the center."

III. On 24 June 1993 the Appellant (Opponent) lodged an appeal containing also the Statement of Grounds. The appeal fee was paid on 22 June 1993.

In the Statement of Grounds the Appellant refers primarily in general terms to facts and arguments brought forward during opposition proceedings. He disagrees with the Opposition Division's opinion and wishes the Board to reconsider the matter. In particular

he objects to section 5 of the decision concerning a purpose of a pulp tower. He finds the subject-matter of the Claims obvious from documents

D1: US-A-4 105 494 and

D2: SE-C-118 397.

IV. The Appellant requests the setting aside of the decision of the Opposition Division and the revocation of the patent in its entirety.

The Respondent (Proprietor) requests the dismissal of the appeal.

Reasons for the Decision

1. The appeal is admissible.
2. No single document on file discloses all the features set out in Claim 1. This is not disputed.

The subject-matter of Claim 1 is thus to be considered as novel within the meaning of Article 54 EPC.

3. *Closest prior art*

- 3.1 Document D1 discloses a pulp tower 1 with stirring and conveying means 3, 8 in the shape of vertical blades fixed to arms 2, see column 2, lines 18 to 21 and Figures 1 and 2. The stirring and conveying means 3 can assist in guiding the pulp in the dilution zone towards the ring-shaped duct 6 (see column 2, lines 59 to 61) in which is located the outlet or blow pipe 7. The arms 2 on Figure 2 rotate anticlockwise (see the arrow around shaft 12 on Figure 1). Thus the blades (scraper plates

3) are so inclined as to direct the pulp in the direction of the outlet. Alternatively the means 3 can be adjusted for feeding outwards to increase the stirring effect, see column 2, lines 61 to 63.

3.2 Document D1 was considered prior to grant to represent the state of the art closest to the present invention and was thus used to divide Claim 1 into two portions as provided for in Rule 29 (1) EPC. Document D2 was additionally cited at the opposition stage but the parties and the Opposition Division apparently accepted that document D1 continued to represent the closest prior art. This view has not been challenged in the appeal proceedings and is accepted by the Board.

4. *Differentiating features, problem and solution*

4.1 Compared with the disclosure of document D1, Claim 1 in its characterising portion specifies that in the area between the vertical shaft of the rotating means and the outlet(s) scraper plates are provided for feeding the pulp from the centre outwards while in the area outwards from the outlet(s) scraper plates are provided for feeding the pulp from the edges towards the centre. It is implicit from this that the outlet(s) must be located somewhere between the vertical shaft and the exterior wall of the tower in order to provide room for scraper plates either side of the outlet(s). While document D1 discloses the feature of scraper plates in the area outwards from the outlet for feeding the pulp from the edges towards the centre, the combination of inwards and outwards feeding scraper plates is not disclosed.

4.2 Starting from a pulp tower as disclosed by document D1 the problem to be solved can be seen as to improve the outflow of pulp from the tower, this being impeded in the prior art arrangement by the central ring-shaped

duct 6 lying between the blades 3 and the outlet pipe 7 and into which duct the stirring and conveying means 8 extend (see document D1, column 2, lines 35 to 39).

4.3 In the invention the location of the outlet(s) part way between the vertical shaft and the exterior wall of the tower avoids the cluttered central area of the tower and pulp flow from the tower is facilitated because the blade orientation differs either side of the outlet(s). Moreover when, as envisaged by Claim 1, a plurality of such outlets is provided, the evenness of the flow downwards over the whole cross section of the tower can be guaranteed (see the present description, column 3, lines 42 to 47).

4.4 Thus the Board considers that the features of Claim 1, and in particular the features of the characterising portion thereof, solve the problem presented by the prior art pulp tower of document D1.

5. *Inventive step*

5.1 Document D1 discloses that the blades of the stirring and conveying means 3 are all located with one orientation, **either** an orientation as shown in Figure 2 to feed the pulp towards the ring-shaped duct 6 **or** an orientation contrary to what is shown in Figure 2 to feed outwards to increase the stirring effect.

The Appellant argues that it is obvious to scrape the pulp towards the outlet and thus, when the outlet is located at a distance from the centre of the tower, it is obvious to scrape the pulp outwards and inwards, respectively, towards this outlet. However there is no such teaching in document D1 to orient some of the

blades 3 one way and some of the blades 3 the other way. Document D1 is clear, all the blades 3 are oriented one way or all the blades are oriented the other.

The Appellant argues that not even an expert is needed to understand that the scrapers have to be arranged to scrape the pulp outwards and inwards, respectively, towards the outlet. This argument is seen by the Board as being the result of an ex-post facto analysis having no support in the available prior art. The skilled person would not consider it **essential** from document D1 to scrape the pulp towards the outlet since in document D1 this is only one alternative for the blade orientation. Hence even if he provided the outlet at a distance from the centre of the tower he could not be led by document D1 to scrape the pulp outwards and inwards, respectively, towards this outlet.

Document D1 on its own therefore could not lead a skilled person to the claimed solution.

- 5.2 Document D2 discloses a digester 1 whose pulp discharge at the bottom is facilitated by a scraper 22. The outlet is between the axis (centre) and the periphery and it appears that blades are provided on a carrier of some form.

There is no clear disclosure in document D2 of the orientation of the blades and so it is not even proven that there is any blade at all pushing the material towards the outlet, let alone that the skilled person would naturally design the tower with some blades pushing one way and other blades pushing the other.

- 5.3 The Board does not see that a combination of the teachings of documents D1 and D2 would result in the subject-matter of the present Claim 1. In the tower of

document D1 all the blades 3 are oriented either one way or the other while the disclosure of document D2 is too vague. Even with an outlet away from the vertical shaft the blades can all be inclined one way since the pulp cannot go beyond the outer wall and so must circulate back towards the outlet and/or centre.

The Board agrees with the Opposition Division that a modification of the tower of document D1 using the teaching of document D2 might yield a tower whose outlet was away from the vertical shaft but would not yield two inclinations of the blades 3.

5.4 The Appellant, disagreeing with section 5 of the Opposition Division's decision, considers it is the purpose of every pulp tower to ensure that pulp cannot stay in some parts of the bottom of the tower for long periods. The Board agrees with the Appellant's view in this respect but considers that documents D1 and D2 neither give an indication of a problem of outlet flow nor give a hint to the features in Claim 1 which provide a solution to said problem.

5.5 The pulp tower according to Claim 1 thus involves an inventive step within the meaning of Article 56 EPC.

6. *Burden of proof*

The Statement of Grounds of Appeal refers primarily to facts and arguments brought forward during opposition proceedings. It is necessary however in an appeal for the Appellant to state where and why he considers the decision to be wrong so that the legal and factual reasons why the decision under appeal should be set aside become clear (see T 220/83, OJ EPO, 1986, 249 and T 534/89, section 3.1). The Appellant makes an allegation of obviousness based on two prior art

documents but, apart from the specific instance referred to in section 5.4 above, gives the Board no arguments as to why the Opposition Division is wrong. After considering arguments presented in the appeal and also those presented during the opposition proceedings, the Board sees no reason to come to a different conclusion to that reached by the Opposition Division. The burden of proof is on the Appellant, being the Opponent, to show any lack of inventive step. The Appellant has failed to substantiate his assertion.

7. Therefore, the subject-matter of Claim 1 is patentable within the meaning of Article 56 EPC, so that the patent based on this allowable independent claim may be maintained as granted.

Order

For these reasons it is decided that:

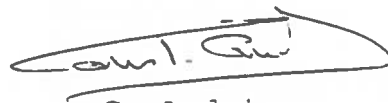
The appeal is dismissed

The Registrar:



N. Maslin

The Chairman:



C. Andries

JPS

